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COLEOPTERA FROM THE GALAPAGOS ISLANDS

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During the past few years several lots of beetles from the Galapagos Islands have been added to the American Museum collection. These were, for the most part, collected on two expeditions. The one in 1925, known as the Templeton Crocker Expedition to the Pacific Islands, was principally concerned in gathering materials for groups of birds to be placed in the Whitney Memorial Hall and in making a collection of Pacific Island archeological materials including studies of the Pitcairn Islanders. The entomological collections were merely incidental.

A visit to Indefatigable Island in 1935 and 1936 by Dr. Wolfgang von Hagen was preliminary to a survey which he hopes to make of the Galapagos Archipelago.

In making his collection of insects, Dr. von Hagen divided the localities into "Ecological Zones" which he refers to as "Zones A, B and C." The first, zone "A," is along the beach just back of tide water. The second "B" includes the vegetation on the lower lands a short distance back of the beach and the third "C" the more elevated portions of the island.

The new species of *Neoryctes* is from material in the United States National Museum. A note concerning this species and *N. galapagoensis* will be found under the specific headings.

A specimen which proved to be a new species of *Monochammus* was collected by Mr. Clarence Hay. It seems almost unbelievable that this genus should appear as far south as the Galapagos Islands. We know of no species having been recorded in America farther south than Mexico; and when Bates described that species in 1880 he remarked "The following is the first yet recorded from America south of the United States." To the best of my knowledge none other has been recorded since that time to this date.

In looking over the Museum collection of unidentified material I came across two other specimens of *Monochammus* labeled "Cocos Isld." This is also a Pacific Island south of Costa Rica located approximately 5° north latitude and 87° west longitude. This makes it appear that

the genus should occur in the Pacific Islands rather then being mainland species which were accidently introduced there. Still more convincing is the fact that these two forms are new to science and are closely related. I have, on account of its close relationship with the Galapagos Island species, included a description of the Cocos Island form in this paper.

A list of the species recorded and described since 1925, including the new forms herein described, with bibliographic references is contained in the pages following the descriptive matter.

The illustrations for this article were made by Mr. Pierre-Noël.

Cicindela vonhageni, new species

Figure 1

Head rugose punctate, metallic coppery to more or less yellow, the yellow markings may consist of a triangular spot reaching from the bases of the antennae and ending in more or less of a point between the eyes, this spot may also be quite small or there may be other spots at the base of the head; labrum pale, narrowly bordered with blackish; front margin with a small triangular tooth at the middle; mandibles darker than the labrum with the apex and margins black; antennae pale with the apical end of the joints narrowly black. Pronotum metallic coppery but often more or less intermixed with yellowish brown; rugose punctate and with a few short white hairs at the sides; sub-apical transverse impression somewhat deep, bisinuate, sub-basal also deep and bisinuate, a median impressed line connects these two impressions. Scutellum coppery, more or less brownish yellow or wholly brownish yellow; cribrately punctate. Elytra usually wholly pale dirty white but sometimes with indications of darker at base between the scutellar region and the humeri; punctures moderately fine with a row of coarser ones near the suture. These coarser punctures start near the suture at base of the scutellum and form a sinuous line along the sutural region; lateral apical angles broadly rounded, sutural angles acute, somewhat pointed. Under surface usually brownish yellow throughout, or this may vary, the pro-meso- and metasternum may be darker or as in one specimen the pro-meso-metasternum and sides of two abdominal segments are coppery; sides of pro-meso and metasternum sparsely covered with moderately short white hairs; the front and middle coxae also with a few white hairs; abdominal segments with sparse white hairs at the sides and a row of bristle bearing punctures along the sub-apical margins; hind legs moderately long, the femora reaching approximately to the end of body, tibiae about the same length as the femora; tarsal joints with their apical ends darker. Length, 13.5–14.5 mm.

The holotype male, allotype female, one male paratype, five female paratypes, and one badly broken female were collected by Dr. Wolfgang von Hagen at Tortugas Bay, Indefatigable Island, Galapagos, November 13, 1935 at 7:30 A.M., in a zone which is termed by the collector "Ecological Zone A. littoral."

There is very little difference between the male and female except that the female is larger and as in other members of this genus the apical abdominal segments differ.

Among the series of nine specimens there are only three that have a full completement of the antennal joints. I have not seen specimens of *C. galapagoensis* but the above is no doubt totally different. It is larger and the elytra are almost immaculate, whereas in *galapagoensis* the elytra have a humeral lunule, a middle band and other markings which would at once distinguish it from *vonhageni*.

Calosoma howardi Linell

This apparently common species has heretofore been listed from seven islands in the Galapagos Archipelago. The collection now before me adds Indefatigable Island to the list. There are four specimens from Academy Bay and three from Conway Bay, May 17–22, 1935, Crocker Expedition. Two specimens "Ecological Zone C," January 29, 1936, at 7 o'clock A.M., Dr. Wofgang von Hagen.

Selenophorus obscuricornis (Waterhouse)

Two specimens of this species were collected by the Crocker Expedition at Tagus Cove, Albemarle Island, March 10, 1935, and five by Dr. Wolfgang von Hagen on Indefatigable Island, October 20, 1935. These latter were recorded from "Ecological Zone C." The only island heretofore specifically mentioned was by Mr. Blair, who recorded it from James Island.

In placing this species in the genus *Amblygnathus* in my former paper (Zoologica, V, p. 234), I merely followed the records of Waterhouse and Linell, but now that I have seen specimens of the species I agree with Blair (1933, Ann. Mag. Nat. Hist., (10) V. XI, 472) that it should be placed in the genus *Selenophorus*.

Tropisternus lateralis (Fabricius)

Two specimens, Indefatigable Island, "Ecological Zone C," Dr. Wolfgang von Hagen.

Alloxacis collenetti Blair

Crocker Expedition. One Tortugas Bay, Indefatigable Island, "Ecological Zone A, littoral" November 13, 1935, Dr. Wolfgang von Hagan.

Necrobia rufipes DeGeer

Two specimens, Indefatigable Island, "Ecological Zone C," October 30, 1935, Dr. Wolfgang von Hagan.

Cissitis maculata Swederus

One specimen, Indefatigable Island, flying within "Ecological Zone A," at 7:30 P.M., Dr. Wolfgang von Hagan.

This specimen does not agree in all details with the description of *maculata*. The antennae are piceous at the base, becoming paler and more reddish apically, the apical segment being a pale red. Each elytron has the basal mark as in *maculata* but the two median and two subapical spots are replaced by somewhat broad, more or less jagged-edged bands. Otherwise this specimen is like those of other *C. maculata* in the American Museum collection.

Anchastus quirsfeldi, new species

Figure 2

Black, antennae, mouth-parts, labrum, and legs median pale brown. Head moderately coarsely and somewhat closely punctate; pubescence brown, sparse; labrum somewhat closely punctate; with somewhat long hairs which are appressed forward; antennae moderately serrate from the third joint, basal joint stout slightly curved, second joint very short, less than one-half length of next, third shorter than the fourth, fourth to tenth subequal in length, eleventh somewhat longer and ending in a rounded point; the antennae are covered with a pale pubescence with sparsely placed longer hairs along the sides and apical margins. Pronotum wider than long; moderately finely but not very closely punctate; pubescence sparse (possibly rubbed); basal angles somewhat pointed and with two carina, the outer one longer than the inner but connecting with it at the apical angle. Scutellum narrowly rounded at apex; not closely punctate and with hairs arising from the punctures. Elytra parallel to about apical third, then gradually narrowing to apex; with nine striae, seven of these are well marked basally, the others somewhat obsolete, all except the sutural striae are more or less obsolete apically; intervals nearly flat and with two series of somewhat small punctures; except on the apical portion where the striae are obsolete; pubescence sparse, moderately long, slightly more dense along the sides and at apex. Under surface somewhat finely and closely punctate; pubescence short and sparse. Length, 13 mm.

Type, paratype, Indefatigable Island, Galapagos Islands, "Ecological Zone C," October 20, 1935, Dr. Wolfgang von Hagen collector.

Aeolus fuscatus Steinhal

One specimen from Charles Island and one from Indefatigable Island "Ecological Zone C." The latter, collected by Dr. Wolfgang von Hagen, may be the above species but the identification is more or less doubtful. They are 6–6.5 mm. in length. The thorax and elytra are reddish brown, but the thoracic angles and margins of the elytra are not paler. The hind angles of the thorax are slightly divergent, the carina is somewhat distinct and extends some distance beyond the base of the thorax. The head and pronotum are quite finely and somewhat densely punctate.

The pubescence on the head and pronotum is quite sparse, especially on the disk. The striae of the elytra are well marked, and the intervals are flat, the pubescence (probably rubbed) is somewhat more sparse on the disk than at the sides and apex in the Charles Island specimen, but in the other it is more uniform. The body beneath is similar in color to the upper surface; closely punctate and with short sparse pubescence. Legs pubescent and slightly paler.

A free translation of the original description of *A. fuscatus* is as follows: Dull reddish brown, pubescent, thoracic angles, and margins of the elytra paler. Prosternum at the sides densely punctate. Antennae fuscous, legs flavous. Length, 6.5 mm.; width of elytra, 1.8 mm.

It belongs in Candeze's Section 1 Subdivision III and probably closely related to *A. binotatus*. The hind angles of the prothorax are hardly divergent, long, but feebly carinate. The yellow area of the upper side merges into the dark parts, particularly the pale spot on the suture and pale suture. Head and prothorax paler above than the elytra and more reddish.

Described from one specimen collected at Nare, Colombia. I have been unable to find any record of this species being recognized since 1875 when the original description appeared.

Temnochila galapagoensis, new species

Figure 4

Elongate, black with a metallic green reflection. Head moderately finely not closely punctate; front behind the labrum with a circular indentation and with a smaller one each side; there is a moderately deep impression at each side of the head near the front, there is also a median impressed line which extends along the apical half. Pronotum wider than long; apical angles projecting forward, hind angles obtuse; not very closely punctate but with an intermixture of larger and smaller punctures. Elytra elongate, parallel to about apical third, nearly three times as long as the thorax; striate punctate; the striae are not at all impressed but consist of alternate rows of larger and smaller punctures on the disk, on the sides the punctures are fine and nearly of equal size; near the apex of the elytra the sutural stria curves outward and then back again to near the suture; sutural angles narrowly rounded. Body beneath punctate with fine and coarser punctures, thoracic segments sparsely, abdominal segments more closely. Length, 15–16 mm.

MALE.—Sub-mental area with a somewhat large projecting armature. The fifth and sixth abdominal segments broadly impressed, concave.

FEMALE.—Sub-mental area smooth, abdominal segments convex. Holotype, male, allotype, female, and one female paratype, collected by Dr. Wolfgang von Hagen on Indefatigable Island, "Ecological Zone C," October 20, 1936.

This species apparently belongs in Sharp's group E in which the pronotum behind the coxae is smooth, not conically prominent. On the

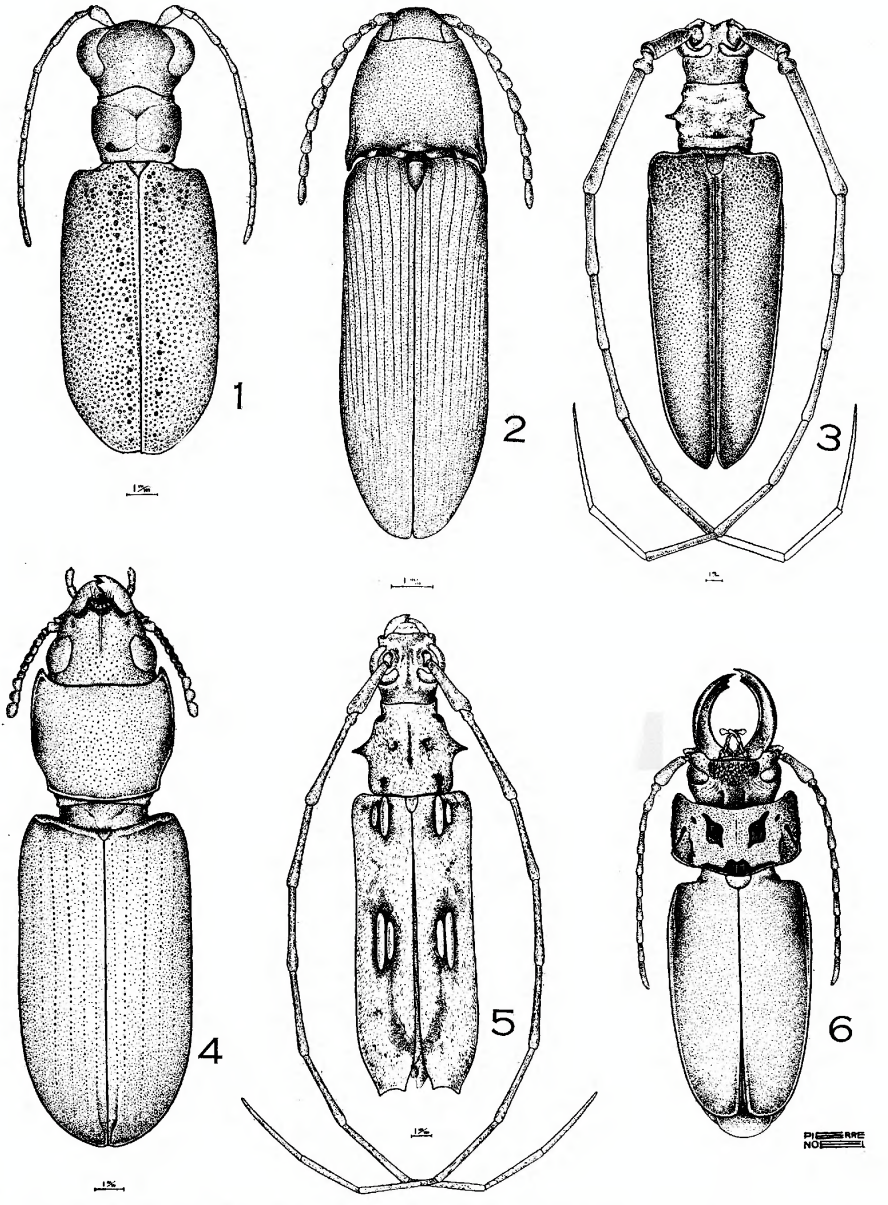

Fig. 1. *Cicindela vonhageni*, new species. Fig. 2. *Anchastus quirsfeldi*, new species. Fig. 3. *Monochammus hayi*, new species. Fig. 4. *Temnochila galapagoensis*, new species. Fig. 5. *Eburia lanigera* Linell, male. Fig. 6. *Stenodontes* (*Mallodon*) *galapagoensis*, new species.

second, third, and fourth ventral abdominal segments of the male there is near the base and laterally a group of more closely placed punctures.

Cycloneda sanginnea (Linnaeus)

Eight specimens of this widely distributed species were collected by the Crocker Expedition on Indefatigable Island, four from Conway Bay, March 19, and four from Academy Bay, March 24 and 25, 1935. All of the specimens have the pale area on the elytra at the base near the scutellum. The head is variable in color from almost wholly black to wholly yellow. The thoracic markings on four specimens agree with the typical form. The others vary as follows: with the pale apical median branch of the pale margin present, the lateral ones connected with the lateral margin enclosing a black spot; or with apical median branch absent, front of pale margin more or less incomplete, with the lateral branches disconnected from the pale margin, therefore this marking is merely represented by a pale spot.

Olla abdominalis (Say)

Eight specimens of this species were collected by Dr. Wolfgang von Hagen on Indefatigable Island, "Ecological Zone C," November 5, 1935.

These specimens belong to the typical form of *abdominalis*, but there is a variation in the number and density of the spots on either or both the pronotum and elytra. Seven of the specimens have seven spots on the pronotum referred to by Say in his original description, although some of these spots are reduced in size or, as in one specimen, they are barely indicated. The other specimen has the middle basal spot missing. The elytra in five have markings similar to those described by Say, although one or more of the spots are only vaguely marked. Three others have the spot nearest the scutellum missing. The one apical and three middle spots are present on all the specimens. All have the surface underneath and legs pale.

Pedoneces morio Boheman

Two specimens which were collected by Dr. Wolfgang von Hagen on Indefatigable Island, "Ecological Zone C," October 20, 1935, agree in most details with Boheman's description of this species. They are slightly larger, measuring 6–6.5 mm. in length and 2.5 mm. in width; also the antennae in one specimen are more piceous red than ferruginous, with the apical joints paler. The legs are piceous red with the tarsi very little, if any, paler. In the other specimen these same parts are darker piceous, except the apical joints of the antennae which are piceous red.

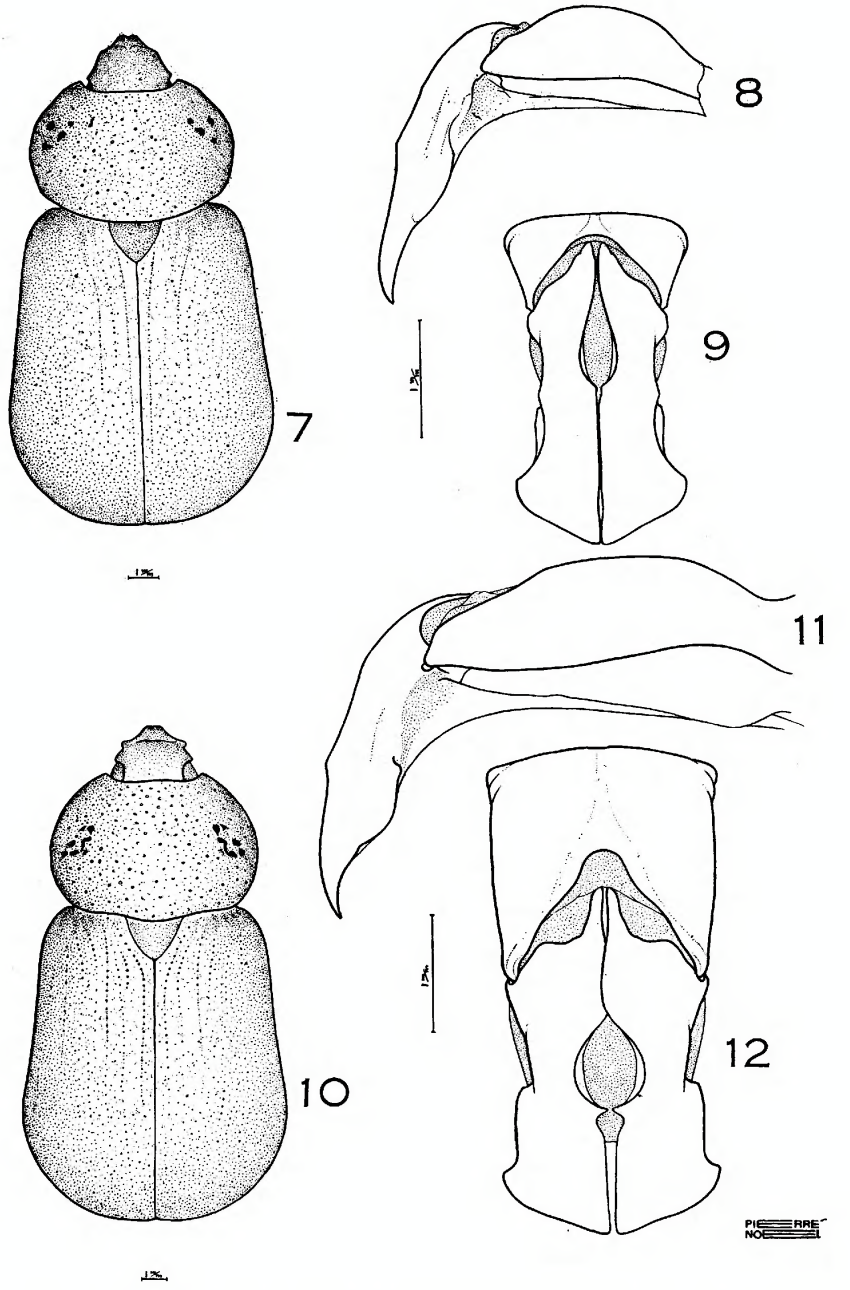

Fig. 7. *Neoryctes galapagoensis* (Waterhouse). Figs. 8 and 9. (*Neoryctes*) *galapagoensis*. Aedeagus of male. Fig. 10. *Neoryctes linelli*, new species. Figs. 11 and 12. *Neoryctes linelli*. Aedeagus of male.

Stonium laevigatum Waterhouse

Six specimens, Tagues Cove, Albemarle Island, March 10, 1935, collected by the Crocker Expedition.

These specimens agree with Linell's description of *S. bauri* but I have placed them here as *S. laevigatum* on the assumption that *bauri* is a synonym of that species.

Ammorphus obscurus Waterhouse

Eight specimens, Tagues Cove, Albemarle Island, March 10, 1935, collected by the Crocker Expedition. Two specimens, Indefatigable Island, "Ecological Zone C," and one, Academy Bay, Indefatigable Island, collected by Dr. Wolfgang von Hagen. One specimen, Charles Island.

This species is apparently widely distributed throughout the Archipelago and from records and the number of specimens collected on different expeditions it is apparently very common.

Schistoceros galapaganus Lesne

One female specimen from Indefatigable Island, collected by Dr. Wolfgang von Hagen.

Neoryctes galapagoensis (Waterhouse)

Figures 7, 8, and 9

Three specimens, one male and two females, collected by Dr. Wolfgang von Hagen on Indefatigable Island, "Ecological Zone C," October 21, 1933, were taken with other material to the U. S. National Museum for comparison. The *Neoryctes* were compared with specimens listed by Linell as *Pseudoryctes galapagoensis.* The generic name being changed later by Arrow to *Neoryctes.*

One of the Linell specimens had been sent to the British Museum for comparison with the Waterhouse type and was returned with the following note: "*Neoryctes? galapagoensis?* hair rubbed off." Dr. Chapin and I compared the two series of specimens and found several external differences. We therefore decided to extract the aedeagus of the two forms. A comparison of these convinced us that we were confronted with two species. We therefore compared the specimens with the original description and became convinced that the ones collected by Dr. von Hagen were representatives of *N. galapagoensis* and that the specimens collected by Dr. G. Bauer on Chatham Island and listed by Linell as *galapagoensis* represented a new form of which the following is a description.

Neoryctes linelli, new species

Figures 10, 11, and 12

Somewhat pale reddish brown, head, pronotum, scutellum, and elytra narrowly margined with darker color. Head shining; with a few coarse, deep set punctures especially on the ocular region; mandibles prominent, strongly rounded. Pronotum moderately closely punctate, with a mixture of coarser and finer punctures; anterior angles acute, posterior rounded. Scutellum triangular, narrowly rounded at the apex; minutely alutaceous. Elytra alutaceous, punctate, the punctures arranged in rows basally but becoming more confused and less evident apically. Propygidium somewhat closely punctate, with a short pale yellow hair arising from each puncture and with two longitudinal bands forming the stridulating organs; pygidium glabrous; sparsely punctate. Underside of head punctate, not closely so, but with a somewhat long hair arising from each puncture. Pronotum punctate and with hairs which are more closely placed along the margins, meso- and metanotum more sparsely hairy; abdominal segments sparsely hairy at the sides and with a row of bristle bearing punctures along the subapical margin. Front tibiae margined with black and with a more or less confused row of bristle bearing punctures on the outer surface. In the female this surface is moderately coarsely punctate throughout. In the male these punctures are much finer; middle and hind tibiae with bristle bearing punctures. Length: male, 16–19 mm.; female, 23 mm.

Holotype male, allotype female, and four male paratypes, in collection of the U. S. National Museum. One male paratype in collection of The American Museum of Natural History. All from Chatham Island.

REMARKS.—The male has the clypeus slightly larger and more sinuate than the female. The posterior angles of the pronotum are obtuse in the female, rounded in the male. The stridulating organs form two longitudinal bands on the middle of the propygidium, these are parallel in the female, convergent to the apex in the male. The apical margin of the propygidium is feebly rounded in the female, it is prolonged into an acute angle in the male. The pygidium is convex and entirely glabrous in the male, the female pygidium has a slight rounded impression at the middle and the margins are ciliate. The anterior tibiae is quadridentate in the female, tridentate in the male.

This species is similar to *galapagoensis* but differs in several characters. The female of *galapagoensis* has the calcar of the anterior tibiae spatulate, in *linelli* it is acuminate. The teeth on the outer margin of the anterior tibiae differ but this may be due to wear. The calcari of the posterior tibiae in *linelli* are strongly flattened and widened, becoming wider apically. In *galapagoensis* the calcari are flattened but parallel-sided, except the smaller one which is abruptly acuminate at the tip. The males differ in that the stridulating ridges in *galapagoensis* are much less regular, the apical teeth much more prominent, and the elytra distinctly alutaceous. In *linelli* the pronotum is less sparsely punctured,

the individual punctures smaller and more defined, the underside of the body is much less hairy, and the elytra more highly polished.

The specimens representing this new species are the actual examples that Linell had before him when he described the genus *Pseudoryctes*.

Stenodontes (Mallodon) molarius Bates

A series of this species, consisting of six male and eight female specimens, was collected by Dr. Wolfgang von Hagen on Indefatigable Island, "Ecological Zone C," November 10, 1935 to January 29, 1936. These specimens vary somewhat in size, the largest male (including mandibles) measuring 74 mm. in length and the smallest 58 mm. The large specimen is also much broader than the others, the thorax being 23 mm. wide and the elytra 25 mm.

A single male specimen similar to the above, but differing in many respects, was collected January 29, 1936. The following is a description of the specimen which I believe represents a new species.

Stenodontes (Mallodon) galapagoensis, new species

Figure 6

MALE.—Elongate, oblong, piceous black. Head broad; front behind the mandibles coarsely and closely rugose-punctate; behind the eyes are several oblique ridges, those near the eyes somewhat deep but gradually becoming less so toward the middle; basal portion of occiput with a short longitudinal fovea each side of middle, between these foveae the occiput is comparatively smooth; mandibles somewhat elongate, gradually curved to apex; dorsal portion concave, this concavity extending to near the apex where there are two teeth, the inner being the longer, the concavity is sparsely punctate but the outer curved portion is more closely punctate with finer and coarser punctures; inner surface of mandibles with moderately long, not very dense brownish hairs; antennae with first joint slightly curved, sensitive surface gradually increasing from third to eleventh joint. Pronotum very similar to *molarius*. Scutellum broadly rounded at apex. Elytra finely punctate, the punctures well separated but distributed over the whole surface; lateral angles broadly rounded; sutural angles with a short sharp spine. Length, not including mandibles, 56 mm. Mandibles, 13 mm. long.

Holotype, Indefatigable Island, "Ecological Zone C," January 29, 1936, collected by Dr. Wolfgang von Hagen.

This species, although similar to *molarius*, differs from specimens in this and the National Museum in being more convex. The mandibles are different, being concave instead of convex above. The head behind the mandibles is coarsely and densely rugose, with two distinct elongate foveae on the occiput. The upper lobe of the eyes is more obliquely narrowed internally with the inner tips more acutely angulate. The

scutellum is more broadly rounded at the apex; and the elytra are finely punctured throughout.

The drawing shows the palpus appearing above the base of the mandibles. This is as shown in the specimen, the mandibles being widely opened.

Eburia lanigera Linell

Figure 5

The female of this species was described by Linell, 1898, Proc. U. S. National Museum, XXI, pp. 259–260, from one specimen collected on Charles Island by the Albatross Expedition. There are now before me two male and six female specimens. To my knowledge the former sex has not heretofore been described.

Linell's description fits very well with the male but in this sex the antennae are much longer than the body, the four apical joints extending beyond the apex of the elytra, the second joint being longer than in the female, the joints from third to tenth not noticeably increasing in length, and eleventh joint about one-third longer than the preceding. The two male and six female specimens were collected on Indefatigable Island, "Ecological Zones A and C," November 17, 1935 to January 25, 1936, by Dr. Wolfgang von Hagen.

Dr. K. G. Blair, 1933 (Ann. and Mag. Nat. Hist., (10) XI, p. 181) says that the above species appears to him as only a variety of *E. stigma* Olivier and refers to the fact that the specimens collected by Mr. Bateson have much shorter spines on both femora and elytra than normal *E. stigma*. In comparing the Galapagos specimens with a small series of *E. stigma* from the West Indies I find that the spines, referred to by Blair, are shorter in *lanigera*. I also find that the pronotum of *lanigera* is smooth in comparison with *stigma* which has quite a number of small granules scattered over the disk. The elytra also show differences as follows: in *stigma* the base of the elytra is quite smooth, there is a line of dense pale pubescence along the suture and the pubescence on the disk is quite short, also the inner basal and outer middle ivory spot are quite narrow. The Galapagos specimens has the discal surface of the pronotum comparatively smoother: elytra with coarse punctures at base, pubescence comparatively long and not paler or more dense along the suture, inner basal and outer middle ivory spot usually not as narrow. A long series of specimens of both forms may bridge these differences but at present I feel satisfied to leave them as separate species.

Monochammus hayi, new species

Figure 3

FEMALE.—Elongate, cylindrical, black, shining. Head rugose-punctate; subapical margin with a transverse carina extending completely across from the base of mandibles, behind which is a deeply impressed line; middle of front with a short, narrow, smooth longitudinal carina; a short distance behind this carina is a longitudinal impression which extends between the bases of the antennae and continues to the base of the head; antennal bases very prominent; the pubescence consists of very short, white hairs with longer scale-like hairs around the margins of the eyes; antennae with the first joint roughly punctate, about one-half the length of the third, fourth slightly more than one-half length of third, fourth to eighth about equal in length (outer joints missing in the type). Pronotum rugose, with a somewhat broad sinuous impressed line behind the apical margin and another antebasal; each side with a somewhat robust spine which projects slightly upward; the pubescence consists of a few white scale-like hairs at the sides and a small patch of the same on the basal middle, the apical margin is fringed with very short, fine white hairs. Scutellum finely punctate; somewhat broadly rounded at apex and with a patch of scale-like hairs at the apical end. Elytra about four times the length of the thorax, obliquely prolonged apically and rather acute at apex; somewhat rugosely and confusedly punctured basally but becoming smooth and more sparsely and more regularly punctate apically; the vestiture on each elytron consists of a small patch of white scale-like hairs at the base between the scutellum and humerus, there are also traces of finer hairs along the lateral margin and apically along the suture. Ventral surface finely punctate and with patches of coarser and finer white hairs; legs elongate; finely punctured; pubescence fine with longer and coarser, black hairs on the apices of the femora and tarsi, pubescence on tarsal pads brown. Length, 27 mm.

This type specimen was collected by Mr. Clarence Hay on Indefatigable Island on his visit to the Galapagos Islands during April, 1930.

There seems to be no American species in this genus with which to compare this form, but in reading over Col. Casey's work on the North American species it apparently fits in the section No. 4 of his "Key": "Elytra each obliquely prolonged apically and rather acute at apex." The only North American species which Col. Casey placed in this group is *M. marmorator* which, except for the form of the elytra, is totally different from the above described species.

Monochammus cocoensis, new species

Head similar to *hayi*. Pronotum with a raised line at the apical margin; behind this, on the sides, is another raised line which fuses with the other on the disk. Each of these lines is, in some of its parts, separated into two or more narrow lines; behind these lines there is a somewhat deep canaliculation which curves toward the base on the disk where there is an indentation that in the male is quite broad and finely punctate. In the female this indentation is less deep and more shining. On the middle of the disk there is a longitudinal impressed line which is somewhat well

marked for a short distance apically then appearing again behind the middle and continuing to a sub-basal impressed transverse line. In the longitudinal impressed line there is a row of coarse white hairs which possibly in fresh specimens continue the whole length of the pronotum (in the specimens before me this line of hairs is broken). There is a deeply impressed line before the sub-basal margin of the pronotum which continues around the sides behind which is a raised line, then another impressed line; the sub-basal margin is indicated by a raised line. Scutellum somewhat thickly covered with white hair. Elytra gradually sloping from the humeri to apex, each elytron ending in a somewhat narrow point; quite coarsely and more or less granularly punctate basally, becoming smoother and more finely punctate apically; the pubescence consists of a patch of white hairs at the base of each elytron between the humerus and scutellum and some microscopic hairs protruding from the punctures, these hairs are slightly more dense along the margins apically. Under surface finely punctured and with short, sparse, white hairs. Length: male, 33 mm.; female, 29 mm.

Holotype, male, and allotype, female, from Cocos Island.

These specimens, although not perfect, are sufficiently so to allow for a description. The most imperfect part is that the male has one antenna missing but six joints of the other are present. Seven joints of one antenna and four joints of another are present in the female. The six joints of the male antennae are approximately one-sixth longer than those of the female. The third joint is about 13 mm. long in the male and 11 in the female. All of the other joints are in similar proportion.

The third joint in the Galapagos specimen is shorter than in the female of this species. As in the Galapagos species this one belongs in Casey's section 4, including the species with the elytra obliquely prolonged. This species is less shining than *hayi*. The elytra are more tapering and the pronotum is very differently formed.

Acanthoderes galapagonesis vonhageni, new variety

This variety differs from the type species as follows: the male in having the semi-erect hairs on the elytra longer and more conspicuous (scarcely visible in the type species); the outer apical angle of each elytron not so strongly produced; and the black markings on the elytra slightly different. The female specimen is badly rubbed so that the markings do not show plainly but, like the male, the outer apical angles of the elytra are not so strongly produced.

Holotype, male, and allotype, female, collected by Dr. Wolfgang von Hagen on Indefatigable Island, "Ecological Zone C," October 21, 1935.

These specimens were compared with Linell's type of *A. galapagoensis* by Mr. W. S. Fisher of the U. S. National Museum, who pointed out the above differences. He also called my attention to the fact that the type species being from Chatham Island may be responsible for the slight differences. In my opinion the above differences are sufficient to consider the Indefatigable Island specimens as a variety.

Metachroma labrale Blair

This species was described by Blair, 1933, Ann. Mag. Nat. Hist., (10) XI, p. 484, from one example collected on James Island. The collection before me contains twelve specimens from Conway Bay, Indefatigable Island, collected March 16 to 22, 1935, by the Crocker Expedition and one specimen from the same island, October 20, 1935, collected by Dr. Wolfgang von Hagen.

Examples were submitted to Dr. Blair who identified them as belonging to the above species. The length of the type is given as 7 mm. The specimens in the series before me vary from 6 to 8 mm. in length.

Docema darwini Mutchler

Three specimens of this species were collected by the Crocker Expedition at Academy Bay, Indefatigable Island, March 25, 1935.

Pantomorus galapagoensis Linell

In my former paper, 1925, Zoologica, V, p. 230, I listed one male and two female specimens from Conway Bay, Indefatigable Island, as *P. galapagoensis*. Since then I have submitted these with twenty other specimens from the same island to Mr. L. L. Buchanan of the National Museum. His reply states that none of these are identical with the Linell species, the type locality of which is Chatham Island. He believes that there may be two or possibly three forms represented. I have examined these specimens and agree with him that there are differences in the specimens collected in the different localities. One form is represented by a single specimen and another by four specimens. I am not herewith describing these as there is a possibility that a larger series may connect them with the species from Conway Bay which I am describing below and which is represented by a series of twenty-three specimens.

Pantomorus conwayensis, new species

Black, shining, pubescence coarse, white, more or less scale-like. Head at base finely punctate; between the eyes and on rostrum rugosely punctured; a median longitudinal sulcus extends from the frontal V-shaped impression on the rostrum to a short distance behind the eyes; antennae with basal joint of funicle moderately short, next joint about one-half longer, remaining joints short, club ovate pointed at apex; pubescence coarse, sparse, excepting on club which is densely and more finely pubescent with a few longer hairs intermixed. Pronotum wider than long; pubescence more dense on sides than on disk; moderately densely finely punctate, alutaceous; disk behind the middle with a median, short, longitudinal, slightly impressed line. Elytra more than twice as long as the thorax, widest about the middle; apex

somewhat suddenly narrowed; striate punctate, the punctures coarser and deeper basally, becoming smaller apically; intervals convex; pubescence more dense at sides and apex. Under surface moderately densely pubescent, that on the side pieces coarser and scale-like. Length, 5–11 mm.

The male and female differ in that the female is robust and quite convex while the male, although convex, is less so than the female. It therefore appears more elongate and slenderer than the female.

Holotype, male, collected by the Williams' Galapagos Expedition, April 1, 1923. Allotype collected by the Crocker Expedition, March 13, 1935. Nine male and ten female paratypes, collected by the Crocker Expedition, March 12–19, 1935, and two female paratypes collected by the Williams' Galapagos Expedition, April 1, 1923. All of the above are from Conway Bay, Indefatigable Island.

My previous paper in Zoologica, 1925, pp. 219–240, contained a list of the species which had been described and recorded from the Galapagos Archipelago to that date. Since that time several species have been added. Corrections have also been made in generic and specific names. Notes referring to these corrections have been embodied in the following, which to my knowledge represents a complete list of species of Coleoptera accredited to the Galapagos fauna from 1925 to date.

Cicindelidae

Cicindela vonhageni, n. sp., p. 2.

Hydrophilidae

Enochrus waterhousi BLAIR, 1933, p. 473.
Enochrus obscurus BLAIR, 1933, p. 473.
Ochthebius batesoni BLAIR, 1933, p. 473.
Coelostoma darwini BLAIR, 1933, p. 474.

Histeridae

Saprinus batesoni BLAIR, 1933, p. 475.

Lycidae

Calocladon testaceum GORHAM, 1881, 'Biol. Centr. Amer.,' Coleop., III (2), p. 28, Pl. II, fig. 20 Recorded by Blair, 1933, p. 476.

Cantharidae

Chauliognathus sulphureus WATERHOUSE, 1878, Trans. Ent. Soc. London, p. 331. Recorded by Blair, 1933, p. 476.

Cleridae

Pelonium longfeldae BLAIR, 1928, p. 677.

Oedemeridae

Oxacis pilosa CHAMPION, 1890, 'Biol. Centr. Amer.,' Coleop., IV (2), p. 156, Pl. VII, fig. 15. Recorded by Blair, 1928, p. 673.
Alloxacis collenetti BLAIR, 1928, p. 477.

Meloidae

Cissites maculata SWEDERUS, 1787, Vetensk. Acad. nya Handl., p. 199, Pl. VIII, fig. 8. See p. 4.

Elateridae

Physorhinus sp.? BLAIR, 1928, p. 477.
Anchastus quirsfeldi, n. sp., p. 4.
Aeolus fuscatus STEINHAL, 1875, 'Coleop. Hefte,' XIV, p. 125. See p. 4.

Temnochilidae

Temnochila galapagoensis, n. sp., p. 5.

Languriidae

Camptocarpus longicollis MOTSCHULSKY, 1860, in Schrenk 'Reisen Annurl.,' II (2), p. 244. Recorded by Blair, 1933, p. 476.

Coccinellidae

Cycloneda sanguinea LINNAEUS, 1763, 'Centurea Ins.,' p. 10, 11. See p. 7.
Olla abdominalis SAY, 1824, Jour. Acad. Nat. Sci. Philadelphia, IV, p. 95. See p. 7.

Alleculidae

Ctesia pedenoides MAKLIN, 1875, Acta. Soc. Fenuica, X, p. 681. Recorded by Blair, 1933, p. 480.

Tenebrionidae

Stomium. In the previous list I recorded four species belonging in this genus. The genus was revised by Blair, 1933, pp. 477–478, who recognizes the following species:

S. galapagoense GEO. R. WATERHOUSE with *S. carinipenne* Linell (spelled *carinatipenne* by Blair) as the male and *S. piceum* Linell as the female synonyms.
S. holopoides GEO. R. WATERHOUSE.
S. laevigatum ? = *S. baueri* LINELL.
S. linelli is described as a new species, p. 478 = *laevigatum* Linell (not Geo. R. Waterhouse). He also, p. 477, lists this species as *mutchleri* but the description fixes *linelli* as the name.
Pedoneces lugubris BOHEMAN, 1858, Eugen. Resa, Zool. II, Insecta I, p. 91, Pl. 1, fig. 5. Recorded by Blair, 1933, p. 479.
Pedoneces batesoni BLAIR, 1933, p. 479.
Rhacius costipennis BLAIR, 1933, p. 480.

Anobiidae

Trichodesma denticollis BLAIR, 1928, p. 675.
Thaptor galapagoensis BLAIR, 1928, p. 676.
Eupactus georgicus BLAIR, 1928, p. 676.
Eupactus alutaceus BLAIR, 1928, p. 677.

Bostrichidae

Tetrapriocera tridens FABRICIUS, 1792, 'Ent. Syst.,' I (2), p. 652. *T. longicornis* Olivier, listed in my former paper, is a synonym of *tridens*.

The form listed by me in 1925 as *Amphicerus cornutus galapaganus* Lesne is listed by Blair, 1933, p. 476, as *Schistocerus galapaganus* Lesne.

Scarabaeidae

Ataenius cribrithorax BATES, 1887, 'Biol. Centr. Amer.,' Coleop., II, 2, p. 95. Listed by Blair, 1933, p. 476.

Ataenius arrowi HINTON, 1936. This species is apparently all or part of the series of thirteen examples listed by Blair as *A. cribrithorax* Bates. They are from the same locality, James Island, and part of the collection made by Bateson. Hinton in his remarks also refers to the specimens as bearing the label "*Ataenius cribrithorax* var." in Dr. Van Dyke's handwriting.

Neoryctes linelli, n. sp. See pp. 9 and 10 for remarks on this species and *N. galapagoensis*.

Cerambycidae

Stenodontes (*Mallodon*) *galapagoensis*, n. sp., p. 11.

Eburia proletaria ERICHSON, 1847, Arch. für Naturgsch., XII, 1, p. 140. Recorded by Blair, 1933, p. 481.

Compsa apicalis BLAIR, 1933, p. 481.

Monochammus hayi, n. sp., p. 13.

Acanthoderes galapagoensis var. *vonhageni*, n. var.

Estola galapagoensis BLAIR, 1933, p. 482.

Estola cribrata BLAIR, 1933, p. 483.

Estola insularis BLAIR, 1933, p. 483.

Chrysomelidae

Metachroma labrale BLAIR, 1933, p. 484.

Doryphora guerini STAL, 1857, Afr. Vet.-Akad. Farb., XIV, p. 54. Listed by Blair, 1933, p. 484 as *guerini* variety with note on differences between the Galapagos form and the typical.

Diabrotica ventricosa JACOBY, 1887, 'Biol. Centr. Amer.,' Coleop., VII, p. 543, Pl. XXXII, fig. 25. Recorded by Blair, 1933, p. 485.

Physonota alutacea BOHEMAN, 1854, 'Monog. Cassididarium,' II, p. 191. Recorded by Blair, 1933, p. 485.

Mylabridae

Spermophagus galapagoensis BLAIR, 1933, p. 678.

Bruchus fuscomaculata BLAIR, 1933, p. 679.

Curculionidae

Pantomorus conwayensis, n. sp., p. 15.

Geraeus batesoni BLAIR, 1933, p. 485.

Dryotribus mimeticus HORN, 1873, Proc. Amer. Philos. Soc., XII, p. 433. Recorded by Blair, 1933, p. 486.

Scolytidae

Pycnarthrum insulare BLAIR, 1933, p. 487.

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1933, ibid., XI, pp. 471–486. 'Further Coleoptera from the Galapagos Archipelago.'

HINTON, 1936, Ann. Mag. Nat. Hist., (10), XVII, pp. 416–418.

The authors and bibliographic references to the species recorded but not described by Blair are referred to under the headings of the respective species.